

2011 FIRELINE SAFETY REFRESHER TRAINING

BUILDING TRUE SAFETY



STUDENT WORKBOOK





Mission Statement:

The intent of annual fireline safety refresher training is to focus line-going personnel on operations and decision-making issues related to fireline and all-hazard incident safety. Refresher training will ensure firefighters have information regarding current initiatives, the upcoming fire season, and any policy/guidance changes. Refresher training is provided in order to recognize and mitigate risk, maintain safe practices, and to reduce accidents and near misses.

<http://www.nifc.gov/wfstar/>

INTRODUCTION

Annual Fireline Safety Refresher Training is required for all personnel participating in wildland fire who may be subject to assignments on the fireline. Check **your** specific agency policy to determine if this training package meets refresher training requirements. You are expected to be an active participant for each exercise and discussion.

PREREQUISITES

Students should have successfully completed S-130 and S-190 and have at least one season as a firefighter.

COURSE OBJECTIVE

Upon completion of this training, the student will be able to understand and apply basic safety principles for wildland firefighting.

COURSE MODULES

TITLE	DESCRIPTION	PAGE
<u>Module 1</u> Introduction- 2010 Season Summary	This module will provide an overview of the 2010 fire season's statistics.	5
<u>Module 2</u> Fire Orders- We've Tried Everything, Almost	This module will provide a review of the ten standard fire orders.	8
<u>Module 3</u> Lookouts- We're Talking About the "L" in LCES	The lookouts module will focus on where and how to position a lookout, break down specific tasks of a lookout and then discuss communication as it related to serving as a fire lookout.	9
<u>Module 4</u> The Incident Action Plan- A Tool For Safety	The importance of the Incident Action Plan is addressed by discussing the subject with firefighters from three different perspectives.	13
<u>Module 5</u> Single Engine Air Tankers- Getting the Results You Want	This module focuses on communicating effectively with single engine air tankers in order to achieve the drop results that you want.	15
<u>Module 6</u> Incident Within an Incident- Delegate For Success	This module will focus on the importance of having a plan of action in place should an incident within an incident occur.	17
<u>Module 7</u> Hazardous Materials- Caution in the Industrial Interface	This module highlights the need for awareness when working in the industrial interface. In recent years, this has become more of a concern to wildland firefighters.	22
<u>Module 8</u> Beyond Your Limits- The Effects of Overexertion	This module focuses on heat illnesses that can be brought on by overexertion. We'll talk about signs and symptoms, how to treat them, and give you guidance on how to avoid these conditions altogether.	23
<u>Module 9</u> Personal Protective Equipment- A Conversation About Gloves and Sleeves	Firefighters have the personal responsibility of assuring that their PPE is worn correctly and at the appropriate times. This module will focus on the need for awareness on the incorrect use of PPE, specifically gloves and sleeves.	25
<u>Module 10</u> Fire Leadership- How To Build A Leader	Leadership begins early on in your fire career. This module will focus on the Fire Leadership Website and give firefighters a place to turn for leadership resources.	28
<u>Module 11</u> Vintage Fire Film- Fire in the Forest	This module features a historical film which highlights some of the early fire prediction indicators	33
Conclusion/Fire Shelter	Hands on fire shelter visual inspections and deployment.	35

The 2011 Fire Refresher was built for firefighters, by firefighters.

Module 1- Introduction

Overview

This module will provide an overview of the 2010 fire season's statistics.

2010 FATALITIES, ENTRAPMENTS AND SERIOUS ACCIDENTS

As Reported by the Risk Management Committee

TYPE		FATALITIES
Entrapment	1 incident, 7 people involved	0
Burnover	5 incidences, 12 people involved 1 shelter deployed	0
Engines, Dozers, ATVs, and Vehicles	5 incidences, 8 people involved	3
Heart Attack	5 incidences	2
Hazard Trees	4 incidences, 4 people involved	0
Other	11 incidences, 12 people involved	3

2010 WILDLAND FIRE STATISTICS

71,971 Wildfires

3,422,724 Acres

5-Year Average

82,360 Fires

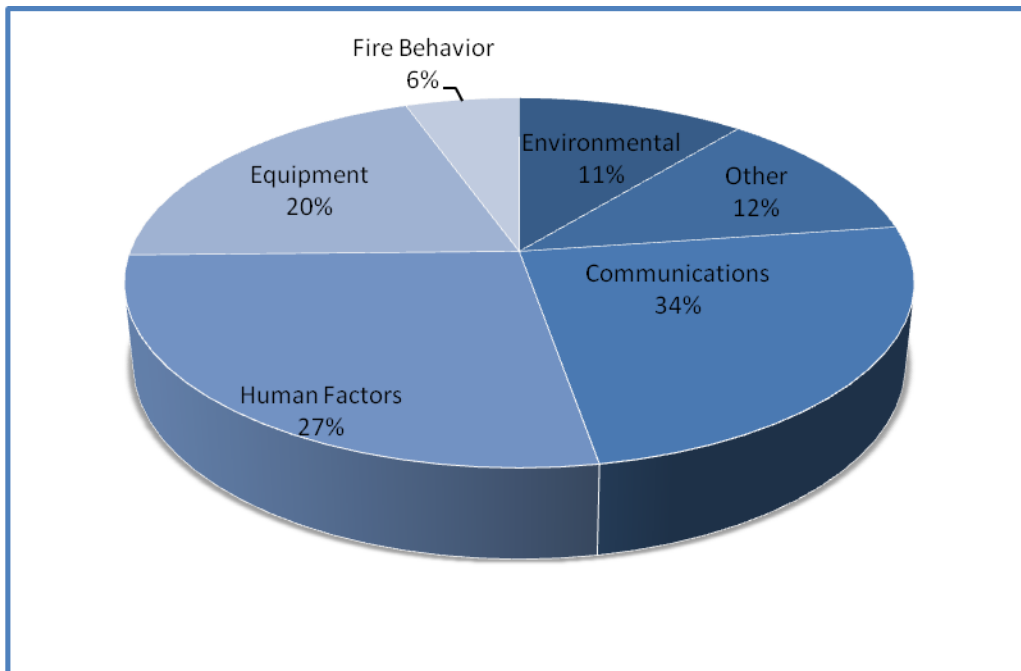
6,767,754 Acres

10-Year Average

76,470 Fires

6,533,846 Acres

2010 SAFENET - Contributing Factors



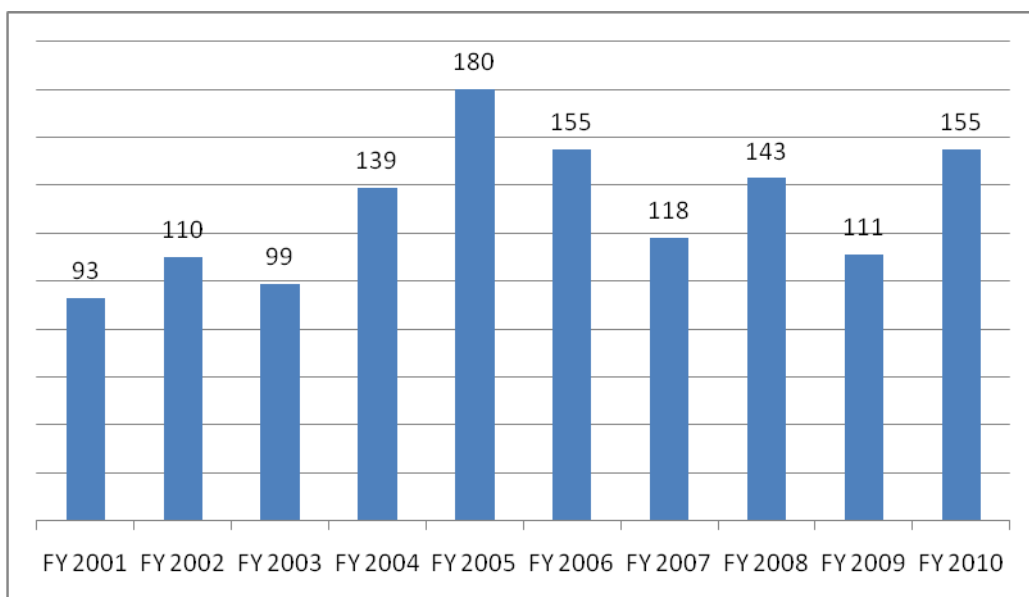
The SAFENET submission process is used by wildland firefighting agencies for reporting and resolving incidents relating to firefighter safety.

There were 155 SAFENETS submitted in 2010.

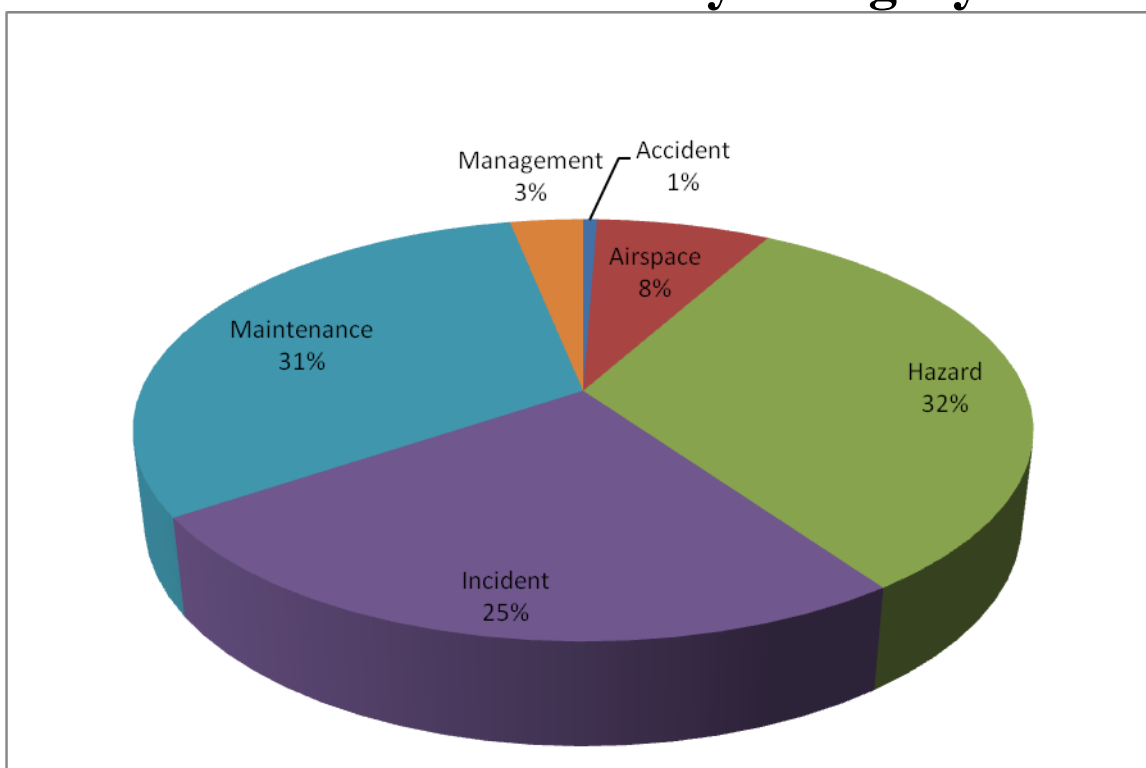
To submit a SAFENET:

<http://safenet.nifc.gov/safenet.nsf/SAFEPOST?OpenPage>

Total SAFENETs Filed



2010 SAFECOM – By Category



SAFECOMs are for reporting aviation mishaps. There were 760 SAFECOM Reports, which is well below the 10 year average of 1,072.

To Submit a SAFECOM:

<https://www.safecom.gov/entry.asp>

Your Local Fire Season 2010

Highlights:

Expectations or predictions for 2011:

Module 2- Fire Orders

Overview

This module will provide a review of the ten standard fire orders.

Standard Firefighting Orders

Fill in the blanks...

1. Keep _____ on _____ weather conditions and _____.
2. _____ what your _____ is _____ at _____ times.
3. Base _____ actions on _____ and _____ of the fire.
4. Identify _____ routes and _____, and _____ them known.
5. _____ lookouts _____ there _____ possible _____.
6. _____ alert. Keep _____. Think _____. _____.
7. Maintain _____ communications with _____ forces, _____ supervisor and _____ forces.
8. Give _____ and ensure _____ are _____.
9. _____ control of your _____ at _____ times.
10. _____ fire _____, having _____ safety first.



Module 3 – Lookouts

Overview

The lookouts module will focus on where and how to position a lookout, break down specific tasks of a lookout and then discuss communication as it relates to serving as a fire lookout.

Being a lookout is not the sexiest job, but it is the most important.

Tony Navarro, Missoula Smokejumper; USDA Forest Service

Lime Fire Scenario: Part I



The Lime fire started on August 17th on the White River National Forest in Colorado. The effects of the Mountain Bark Beetle have been devastating in this region, and the fire started in an area whose primary fuel type is bug killed lodgepole pine. The weather over the past several days has generally been temperatures in the 70s and 80s with occasional 90 degree readings and humidity dropping into the middle teens. The current temperature is 75 with an RH of 25%. The forecast calls for a high temperature of 85 and RHs dropping into the low teens. Also, there are widely scattered thunderstorms forecasted for this afternoon. Fuels over the fire area generally consist of grass/sage with scattered junipers, ponderosa pine and clumps of bitterbrush and curly-leaf mahogany.

*****DO NOT PROCEED UNTIL DIRECTED TO DO SO BY
FACILITATOR*****

You are the incident commander and the squad leader of a five person module who have been ordered to initial attack the fire-which appears to be about 20 acres in size at the time of initial attack. It is 0900 and your crew has arrived on scene and is preparing to receive a briefing. You will need to assign a lookout for the fire.



What considerations should be made when designating a crewmember to serve as the lookout? (considering experience level, specialized skills, etc.)



What considerations should be made when choosing a location for the lookout? (considering fuels, weather, topography, etc.)?

*****DO NOT PROCEED UNTIL DIRECTED TO DO SO BY
FACILITATOR*****

You are now the lookout. It is 1500 and fire activity is starting to pick up. The incident commander has ordered a 20 person crew and a helicopter to start performing bucket drops on the fire. The temperature is 86 degrees and RH is 13. You notice some cloud build up to the southeast.





As the lookout, do you still have a good view of the resources you are responsible for? If not, what actions need to be taken?



You are starting to observe fire behavior that is concerning and you need to get on the radio to let the crew boss know. There is too much radio traffic and you can't break through. What are your options?



Planning ahead for a worst case scenario situation, what types of considerations should you be thinking about?

 A special thanks to 
Tony Navarro and Myron Hottinger
for their efforts toward the production of this module.



Fire Behavior for Lookouts

Lookouts must monitor and understand the fire environment components of weather, topography and fuels and recognize how each component will modify the fire environment; all while watching for the important indicators of change. Recognizing these indicators of change early, understanding their ramifications and effectively communicating how they will alter the fire environment is paramount to developing, maintaining and updating situational awareness in this dynamic fire environment.

Some indicators to observe:

Weather: Most dynamic component of the fire environment and will usually precede any changes in fire behavior

- Wind Speed – Changes in forecasted direction and/or speed.
- Relative Humidity – Trends up or down; abrupt changes
- Temperatures- Increasing or decreasing
- Probability of Ignition - increasing or decreasing
- Clouds- Type, changes in direction, development; indicator clouds for thunderstorms
- Inversion- lifting or settling
- Fire whirl or dust devil development – atmospheric instability
- Fire Weather Forecast Updates or unexpected weather conditions developing

Fuels: Can vary greatly in the fire environment and change conditionally over time

- Changes in fuel types – Increases or decreases in rates of spread or flame lengths
- Canopy Continuity – Fuel shading, spotting potential, torching and crown fire potential
- Exposure – Winds and sunlight impact on surface fuels
- Fuel Moisture – Abrupt changes, seasonality or reaching local thresholds in live and dead fuels
- General condition – Health, seasonal curing, continuity, fuel loading

Topography: Static, but topography will alter fire behavior as the fire progresses into new terrain

- Barriers to spread - Natural or man-made
- Slope – Increases or decreases, reversals
- Saddles, narrow canyons and box canyons
- Ridges and leeward slopes

Any component you observe that is out of the ordinary, unexpected or un-forecasted may be that critical early warning indicator to potentially abrupt changes in your fire environment.

Some indicators of change may be more difficult to detect and monitor than others; but ultimately, if any unexpected or rapid changes in the fire behavior occur (developing column, increasing rates of spread/flame lengths, increasing spot fires and rapid transition from single/group tree torching to crown fire) need to be communicated immediately.

Module 4- The Incident Action Plan

Overview

The importance of the incident action plan is addressed by discussing the subject with firefighters from three different perspectives.

A review of the incident action plan provides a lot of information required to stay safe.

Brian Eldredge, Fire Training Specialist; Bureau of Land Management

Standard Firefighting Orders



1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times.
3. Base all actions on current and expected fire behavior.
4. Identify escape routes and safety zones, and make them known.
5. Post lookouts when there is possible danger.
6. Be alert. Keep calm. Think clearly. Act decisively.
7. Maintain prompt communication with your forces, your supervisor, and adjoining forces.
8. Give clear instructions and be sure they are understood.
9. Maintain control of your forces at all times.
10. Fight fire aggressively, having provided for safety first.

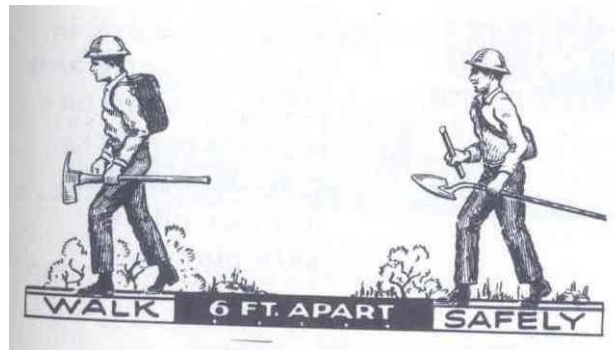


Incident Action Plan Exercise

How does the Incident Action Plan relate to the 10 Standard Firefighting Orders?

Fill in the blanks with the Standard Firefighting Orders that relate to the appropriate section of the IAP. The first one has been completed for you.

COMPONENTS OF THE IAP	STANDARD FIREFIGHTING ORDERS
Incident Objectives (ICS-202)	6, 8
Organization Assignment List (ICS-203)	
Division Assignment List (ICS-204)	
Incident Radio Communications Plan (ICS-205)	
Medical Plan (ICS-206)	
Air Operations Summary (ICS-220)	
Unit Log (ICS-214)	
Safety Message	
Training Specialist Message	
Incident Map	
Incident Weather Forecast	
Fire Behavior Forecast	



A special thanks to
Brian Eldredge, Deon Berner and Kyle Severe
 for their efforts toward the production of this module.



Module 5 – Single Engine Air Tankers

Overview

This module focuses on communicating effectively with single engine air tankers in order to achieve the drop results that you want.

Pilots want feedback because they take pride in their work and want to do it the right way.

Joe Bates, Retired Aviation Safety Program Manager; Bureau of Land Management

SEAT Briefing Exercise:

Using the Incident Pocket Response Guide's, "Directing Retardant and Bucket Drops" reference (located in the blue section); answer the questions below based on the following scenario.

You have responded to a single tree fire which consists of a 60 foot snag that appears to have substantial heat inside, the fire has not spread to the surface fuels. There are some embers and a smoke column coming from the top of the snag. You survey the area and see a uniform open timber stand and several other snags nearby. The main concern is the surface fuels which are thick and continuous grasses.

The snag is located mid-slope on one of the more prominent peaks in the area. Due north on the summit of the peak is the forest's Anderson repeater station along with some other radio towers. The snag will fall directly downhill if it goes on its own, but doubt you'll be able to catch any surface fire due to the high spread potential. After sizing up the snag, your falling experience tells you it's too hazardous to fall with a chainsaw and too dangerous to dig handline around it.

Dispatch informs you a loaded SEAT is available and airborne in the area. You plan to use retardant to cool the snag while also pre-treating the area where it will fall. You're pretty confident the retardant will work and with no other reasonable options available, you request the SEAT. Dispatch provides you the call sign and the air-to-ground frequency. You locate a place well out of the way of the snag and drop area with a good view.

You attempt communication with the SEAT and can faintly hear an aircraft to the north, but the transmission was faint and scratchy. However, dispatch comes in clearly and you just heard them tell the SEAT they were positive on automated flight following (AFF). You know he's familiar with the area, but he doesn't know where your fire is. No GPS is available and dispatch only had a very general location for the fire.

- 1) Write a brief description of how to talk the pilot into your location if you establish communication; also, what other options do you have if you cannot establish direct communications with the SEAT?
- 2) Prepare a briefing for the pilot with your intent to achieve the desired/needed results.

Directing Retardant and Bucket Drops (from IRPG, Aviation Section)

- ✓ **Give general location** on incident to aerial resource – division/head/heel/flank.
- ✓ **Finalize location** with:
 - Clock position from pilot's perspective (see IRPG front cover).
 - Description of prominent landmarks
 - Target position on slope – lower 1/3, upper 1/3, mid-slope, top of ridge, etc.
 - **Use signal mirrors whenever possible.**
 - Use panels or flagging to mark target as needed.
- ✓ **Describe target** from your location and explain mission. The pilot will decide drop technique and flight path.
- ✓ **Know the pilot's intentions** prior to the drop. Clear the area to avoid direct flights over ground personnel and equipment.
- ✓ **Give feedback** to the pilot about drop accuracy. Be honest and constructive. Let pilot know if drop is early, late, uphill, downhill, on target, too high, too low, etc. Report low drops immediately.



A special thanks to
Queen Bee Aviation, Joe Bates and Mark Bickham
for their efforts toward the production of this module.



Module 6- Incident Within an Incident

Overview

This module will focus on the importance of having a plan of action should an incident within an incident occur.

After having that evolve, I realized that us firefighters stick together more than I'd thought.

Matt Lavigne, Wildland Firefighter, Deer Park Incident

Black Canyon Tactical Decision Game



Background:

You are a crewmember of a Type II crew from the west that has recently been mobilized to Florida as an initial attack resource during a very hot, dry summer where catastrophic fires are burning much of southern and central Florida. It is 1600 on June 30th and you are working on a burnout on a small, but rapidly growing new start. The name of the incident is Black Canyon and it is currently 24 acres. Half of your crew is running the ignition operation and you are working with the other half that is holding. A tractor-plow has constructed line ahead of the fire, tying it to a road, and your objective is to reinforce the line by burning it out. The burnout is very time sensitive, as the later in the day it gets, the RH climbs rapidly and burnout efforts will be futile. It is expected that if the burnout operation is not completed in a timely manner, that the main fire will overrun the tractor plow line and become another large fire amongst the many others currently burning.

Your crew was put together from local district folks from your forest. Many of you have not worked together before and you are still building cohesion and trust. The crew boss is very experienced, and she has divided everyone into just 2 squads. You are acting as one of the squad bosses. Also on your crew is one EMT.



Current Conditions:

Weather: clear now, predicted late afternoon thunderstorms

Wind: 3-5 mph out of the southwest

Fuel Model: 7, Southern Florida Flatwoods, Palmetto, Pine overstory

Resources Assigned to Fire:

IC – unknown location, no contact

Tractor/Plow with Tractor/Plow Boss

20 person Type II Crew, the Crew Boss is acting as the burn boss

Type IV engine on road with three crewmembers

Current Situation:

The burn is progressing well, and so far there hasn't been much work for the holding crew. You move down your piece of line to tie in with one of your experienced crewmembers, who has mentioned a sting or bite to the hand from an unknown insect. He says it's "no big deal" and is focusing on being within a few hours of wrapping up the burnout and catching this fire. You did notice that his hand was beginning to swell a little, but decide that he knows himself well enough and since he isn't worried, you shouldn't be, so you move on with your holding duties.

*****DO NOT PROCEED UNTIL DIRECTED TO DO SO BY
FACILITATOR*****

The Situation: Continued

Twenty minutes later, you have to go talk to your crewmember again and you inquire about the sting. The swelling is definitely moving up his arm and he is complaining about his throat feeling a little tight, but is still adamant on getting this burn accomplished. You decide to stay with the crewmember to monitor him.

Another 10 minutes goes by and there is noticeable swelling in his face and he is having trouble talking. Your general impression is that he cannot continue working, and needs further medical care. You call up the crew boss to update him of the situation.

The crew boss informs you that he cannot reach the incident commander from his location and that he would like you to be in charge of this medical emergency. Air attack has just returned over head from refueling.

Take a look at the image shown on the screen. You can see the main fire, burnout operations, tractor plow completed lane and resources on scene. The patient is circled in red.



What actions should you take?

Deer Park Chronology of Events

August 10, 2010

1027- First medical call is received by fire leadership of an injury on Division C. A brief description is relayed of the injury and victim, and EMT's and various other personnel are dispatched to the location of the victim.

1030- Call is received that injury is a possible femur fracture from a rolled boulder, and request for a medivac is relayed to Division C.

1035- Squad leader from Flathead IHC established as Incident Commander of medical situation, and EMT's begin to assess and treat the patient.

1040- Division C tactical radio frequency is cleared for medical emergency traffic only, and a request for a lifelight helicopter for patient evacuation is ordered.

1056- Message relayed to operations from Lifelight A, helicopter is spooling up, ETA 28 minutes from scene.

1100- Secondary Medivac spot discovered, and Incident Commander established to run Medivac Spot #1 construction.

1130- Lifelight A arrives on scene, and ground personnel are unable to establish communications with helicopter.

1135- Lifelight A lands at Medivac Spot 1, flight nurse exits helicopter, assesses landing zone, and discusses situation with Medivac Spot 1 marshal. Marshal relays that helicopter should remain at full power as victim is minutes away from being loaded. Flight nurse returns and talks to pilot.

1140- Lifelight A shuts down power. As helicopter is spooling down it tips backwards and comes to rest on the bottom of its internal fan tail rotor. Pilot exits helicopter safely.

1144- Information is relayed to medical personnel that there has been an issue with the helicopter, and to hold victim in place. Lifelight medical personnel head towards victim's location.

1148- Construction begins on Medivac Spot #2 located 100 yards above victim's location. Lifelight medical personnel assume command of patient care.

1224- Personnel on scene meet and clarify incident organization. Separate individuals are established as Incident Commanders of Helicopter Issue, Medivac Spot #2 construction, patient care, and fire suppression activities in Division C.

1240-1250- Personnel stabilize Lifelight A. Alternate plan to use Helicopter 352 for patient removal from Medivac Spot #2 is established. Construction of Medivac Spot #2 continues.

1252- Operations is informed by dispatch that a National Guard hoist capable helicopter is in route to incident.

1325-1335- Supplies arrive via slingload at Medivac Spot #1 and Lifelight A is secured.

Deer Park Chronology of Events (Continued)

1402-1408- Medivac Spot #2 is completed. Helicopter 352 flies over and approves Medivac Spot #2. Personnel resume moving patient towards Medivac Spot #2.

1410- Helicopter 352 sets down at Medivac Spot #2.

1415- National Guard hoist capable helicopter arrives at Deer Park Helibase.

1417- Patient arrives at Medivac Spot #2. Patient is loaded with lifeflight medical personnel and fire paramedic. Helicopter 352 departs for Deer Park helibase.

1450- Helicopter 352 lands at Deer Park Helibase. Patient and caregivers are transferred to a larger and faster National Guard helicopter to facilitate in-flight medical care. Helicopter departs for Boise St. Alphonsus Trauma Center.

1730-1830- Lifeflight B arrives at Medivac Spot #2 with helicopter mechanic. Mechanic assesses Lifeflight A. Smokejumpers, Flathead and Texas Canyon IHC's return Lifeflight A to a level position on the Medivac Spot #1 heli-pad.

1930-1945- Lifeflight A conducts run up checks and departs Medivac Spot #1.

Recommendations from Lessons Learned (taken from Deer Park Facilitated Learning Analysis)

- 1. Improve and Standardize Emergency Medical Standards, Training and Equipment.**
- 2. Establish Better Communication Standards with Cooperating Partners.**
- 3. Review Communication Protocols.**
- 4. Emulate Positive Aspects of the Type I Firefighter Program.**
- 5. Distribute Dutch Creek Investigation Report Implementation guidelines more extensively to ground level firefighters and management teams.**



**A special thanks to
Matt Lavigne, Dave Estey, Shawn Borgen and Harvey Carr
for their efforts toward the production of this module.**



Module 7- Hazardous Materials

Overview

This module highlights the need for awareness when working in the industrial interface. In recent years, this has become more of a concern to wildland firefighters.

If you don't know what it is, then avoid it.

Tony Beitia, Wildland Fire Safety Specialist; Bureau of Indian Affairs



Hazardous Materials Scenario



Your unit is experiencing above average fire activity this season and numerous resources have been brought in from out of the area. You have been tasked with briefing an incoming crew on the standard operating procedures for industrial interface hazards in your unit. Create a list of any industrial interface hazards that you are familiar with in your area. How can these hazards be mitigated?



A special thanks to
Tony Beitia and Dave Bott
for their efforts toward the production of this module.



Module 8- Beyond Your Limits

Overview

This module focuses on heat illnesses that can be brought on by overexertion. It will address signs and symptoms, how to treat them, and give you guidance on how to avoid these conditions altogether.

Once you recognize there's a problem, don't wait to notify your leader.

Bill Arsenault, Fireline Paramedic

Heat-Related Injuries (Red Section, IRPG)

	Signs/Symptoms	Treatment
Heat Cramps	<ul style="list-style-type: none">• Sweating• Dehydration• Transient Muscle Cramps	<ul style="list-style-type: none">• Place in shade• Loosen clothing and stretch muscles• Slowly give fluids• Monitor
Heat Exhaustion	<ul style="list-style-type: none">• Profuse sweating with cool, clammy skin• Dehydration• Persistent muscle cramps• Dizziness and headache• Decreased urine output	<ul style="list-style-type: none">• Place in shade• Loosen clothing and stretch muscles• Slowly give fluids• Monitor, medevac if no improvement
Heat Stroke	<ul style="list-style-type: none">• Hot, dry skin• Rapid, weak pulse (100-120 at rest)• Hyperventilation• Vomiting• Involuntary bowel movement• Dizziness, confusion and irritability• Seizures or loss of consciousness	<ul style="list-style-type: none">• Cool body as quickly as possible with water (river, fold-a-tank, etc.)• MEDEVAC IMMEDIATELY



A special thanks to
Dr. Gary Brandecker and Bill Arsenault
for their efforts toward the production of this module.



Heat Injury Cards Exercise



You are bustin' out some line and your swamper starts complaining about being thirsty and getting leg cramps. He is most likely:

- A) being a baby and should get in better shape
- B) has heat cramps, is more than likely contagious and you should keep away
- C) should take a break, eat some food and drink some water

You are an EMT and have been called to assess the condition of a firefighter who has gone down with minor heat illness. After your assessment, you recommend:

- A) have the firefighter go back to ICP and rest for the remainder of the shift.
- B) they should power on. There is work to do and their symptoms should go away in a little bit.
- C) drink a lot of caffeine; this should give them more energy to finish the shift out.



Your crew is about to do their morning physical training hike. A fellow crewmate insists that everyone should chug two quarts of water before. You should really be drinking water:

- A) throughout the day
- B) before and after exercise
- C) intermittently during exercise
- D) all of the above

You are from Alaska and your crew has been sent to Southwest Arizona on a fire. To properly acclimate to the heat you should:

- A) take it easy for a few days to allow time for your body to adjust to the change
- B) get right to work, you are in great shape so why should it matter?
- C) spend as little time as you can out in the heat, refusing to go out on the fireline



The best course of action for treating a suspected heat related illness is to:

- A) disengage; try to shed some layers and sip water or a sports drink.
- B) work out harder; no pain, no gain.
- C) get the individual away from anyone else who could become affected; you don't want the rest of the crew to come down with it!

You are a division supervisor on a fire and come across a firefighter on a crew who is complaining of dizziness and severe headache. He tells you he has vomited a few times, and has stopped urinating. You should:

- A) tell him to keep up the good work, and you continue up the line.
- B) you check his pulse and find it rapid, so immediately call for Medivac.
- C) you tell him it sounds like he has the flu; he should contact his crew boss and get back to ICP.



Which color of urine would indicate an adequate hydration status?

- A) dark, cola colored
- B) bright yellow
- C) a pale, wheat color

One of your crewmembers has the habit of drinking energy drinks instead of water, arguing that any type of liquid will hydrate you. She is:

- A) wrong, she should supplement her energy drink intake with coffee, both are effective means of hydration.
- B) wrong-energy drinks with high levels of caffeine have a diuretic effect on your body and she should drink more water
- C) correct, caffeinated beverages still provide hydration and it's the same as drinking water.



Module 9- Personal Protective Equipment

Overview

Firefighters have the personal responsibility of assuring that their PPE is worn correctly and at the appropriate times. This module will focus on the need for awareness on the incorrect use of PPE, specifically gloves and sleeves.

We should never stop doing everything we can to prevent burn injuries.

Bob Knutsen, Nevada State Safety Manager, Bureau of Land Management

Personal Protective Equipment Exercise



Answer the following questions and discuss responses with the your group. The following questions were taken from eleven actual questions asked of Nevada BLM Firefighters in 2010 during a Safety Stand Down.

*****DO NOT PROCEED UNTIL DIRECTED TO DO SO BY
FACILITATOR*****



Group 1 answers the following four questions:



(1) What is the policy on wearing gloves?

(2) When is it acceptable to not wear gloves?

(3) How do you ensure PPE is correctly used/available at the immediate time you need to use it?

(4) You are the State FMO or District FMO. What is your solution to ensure that all employees wear PPE correctly and at the correct times?



Group 2 answers the following four questions:



(5) As a crew leader, what is your responsibility to ensure PPE is worn?

(6) Is punitive action acceptable for not complying with existing PPE policies?

(7) Are there other methods for not complying with existing PPE policies?

(8) You are the State FMO or District FMO. What is your solution to ensure that all employees wear PPE correctly and at the correct times?



**A special thanks to
Bob Knutsen**
for his efforts toward the production of this module.



Module 10- Fire Leadership

Overview

Leadership begins early on in your fire career. This module will focus on the Fire Leadership Website and give firefighters a place to turn for leadership resources.

<http://www.fireleadership.gov/toolbox/toolbox.html>



Paul Gleason
Lead by Example
Award



Values
and
Principles



Leadership
Toolbox



Training
Courses



Leadership
Committee

Leadership Toolbox

Duty

Prepare Your Subordinates

Professional Reading Program

Leadership in Cinema

Be Proficient

Staff Ride Library

Make Sound Decisions

Tactical Decision Games Library

Sand Table Showroom

Ensure Tasks are Completed

Standard Operating Procedure Guide

Respect

Know Your Subordinates

L-380 Crew Cohesion Assessment

Keep Subordinates Informed

Briefing and Intent

Build the Team

L-280 Leadership Assessment Course

Employ Subordinates Appropriately

After Action Reviews

Integrity

Know Yourself

Self-Development Plan

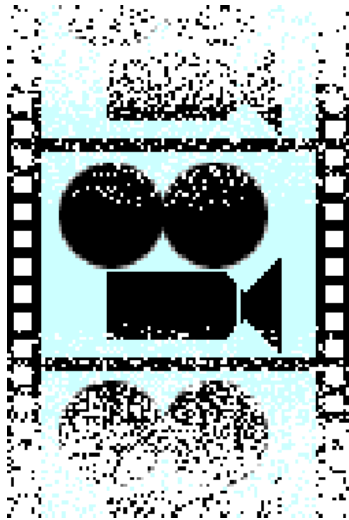
Set the Example

Leaders We Would Like to Meet

Seek Responsibility

About Leadership

Leadership in Cinema



The Leadership in Cinema program is intended to provide a selection of films that will support continuing education efforts within the wildland fire service. Films not only entertain but also provide a medium to teach leadership at all levels in the leadership development process—self or team development.



Leadership Discussion Topic 1



What movie have you seen recently that provided a powerful leadership lesson?

Crew Cohesion Assessment

In terms of crew cohesion, each crew is different, and even the same crew with the same people will vary in the level of cohesion from time to time. The Crew Cohesion Assessment is designed to provide a tool to measure crew or team behaviors as they relate to cohesion.

Crew cohesion is no mystery. The factors that make crews and teams cohesive are well known, documented through the centuries in both literature and research. This tool describes behaviors that are grouped into seven general categories representing characteristics of cohesive groups. Although not all-inclusive, the list can provide a place to start in determining the strengths and weakness of your crew or team in relation to team cohesion.

The interpersonal dynamic of teams or crews changes constantly. What was true last year may not be true today. A leader's responsibility is to continually monitor and assess the health and well-being of the crew and its members. This tool can be used independently by a single crew leader, by a leadership team, or with the crewmembers.



Leadership Discussion Topic 2



What is the value of assessing your crew cohesion?

Self Development Plan

No matter how long you work in the wildland fire service, being a successful firefighter means being a student of fire. Along your career path you will have many opportunities to learn. A complete leadership development process will include formal training, challenging field experiences, and your own self-directed learning efforts.

Use the table below as a guide for starting your Self Development Plan Worksheet.

Leadership Level	Development Goals
<u>Follower/Aspiring Leader</u> Takes responsibility for personal actions and decisions Becomes competent in basic job skills Takes initiative and learns from others <u>Asks questions</u> and develops their communication skills	<ul style="list-style-type: none"> • Read the <u>Individual Development Plan Guide</u>. • Speak with your supervisor about your agency's formal IDP process. • Start your <u>Self Development Plan Worksheet</u>. • Become familiar with the <u>Wildland Fire Leadership Values and Principles</u>. • Become familiar with <u>Leading in the Wildland Fire Service</u>. • Select and read a book from the <u>Professional Reading Program</u> • Attend the <u>L-180 Human Factors course</u>. (online) • Lead a small group discussion on a familiar topic such as pump or chainsaw operations or safety session.
<u>New Leader</u> Accepts responsibility, not only for their own actions, but for those of their team Understands organizational structures (ICS and agency) Demonstrates proficiency in job skills as a leader <u>Asks questions</u> in order to learn from others Establishes a relationship with a <u>mentor</u>	<ul style="list-style-type: none"> • Review and update your <u>Self Development Plan Worksheet</u>. • Read and discuss <u>Leading in the Wildland Fire Service</u>. • Select and read a book from the <u>Professional Reading Program</u> annually. • Attend the <u>L-280 Followership to Leadership course</u>. • Obtain and review your agency organization chart. • Attend next formal course in your ICS function. • Do a <u>Crew Cohesion Assessment</u> for your crew. • Seek a temporary assignment on a different type of crew. • Serve as a <u>unit instructor</u> for a fire training course at your home unit. • Research and present to your crew a historic fire, near miss, <u>incident review</u>, etc.
<u>Leader of People</u> Demonstrates expertise in job skills Develops credibility and reputation Develops own ideas <u>Mentors</u> New Leaders	<ul style="list-style-type: none"> • Review and update your <u>Self Development Plan Worksheet</u>. • Read and discuss <u>Leaders We Would Like to Meet</u>. • Read at least two books annually from the <u>Professional Reading Program</u>. • Attend the <u>L-380 Fireline Leadership course</u>. • Attend the next formal course in your primary ICS function. • Attend an entry level course in another ICS function. • Be the lead <u>instructor</u> for a fire training course at your home unit. • Become a proficient facilitator of <u>After Action Reviews</u>.

<p><u>Leader of Leaders</u> Demonstrates breadth of experience</p> <p>Provides direction in situations with significant consequence</p> <p>Shares <u>ideas</u> for the broader organization</p> <p><u>Mentors</u> Leaders of People</p>	<ul style="list-style-type: none"> • Review and update your <u>Self Development Plan Worksheet</u>. • Read and discuss <u>Communicating Intent</u>. • Read at least three books annually from the <u>Professional Reading Program</u>. • Attend the <u>L-381 Incident Leadership course</u>. • Attend formal <u>training</u> in your primary and secondary ICS functions. • Write an article for an agency or professional publication. • Become a proficient facilitator in <u>Tactical Decision Games</u>.
<p><u>Leader of Organizations</u> Influences organizational decisions</p> <p>Anticipates and plans for future operations</p> <p><u>Mentors</u> promising Leaders of Leaders for key roles in the organization</p>	<ul style="list-style-type: none"> • Review and update your <u>Self Development Plan Worksheet</u>. • Read the monthly <u>Wharton Leadership Digest</u>. • Read at least four books annually from the <u>Professional Reading Program</u>. • Attend the <u>L-480 IMT Leadership course</u>. • Attend formal <u>training</u> in your primary and secondary ICS functions. • Attend a <u>NWCG Committee</u> meeting as a guest. • Be a lead <u>instructor</u> at a <u>Geographic Area Training Center</u>. • Design and conduct a <u>Staff Ride</u>. • Attend <u>L-580 Leadership is Action</u>.



Leadership Discussion Topic 3



What is the benefit of creating a Self Development Plan?



A special thanks to
Travis Dotson, Laif Morrison and the Hammett Fire Crew
 for their efforts toward the production of this module.



Module 11-Vintage Film: Fire in the Forest

Overview

This module features a historical film which highlights some of the early fire prediction indicators.

Protect your forests and they'll grow forever.

Fire in the Forest

Vintage Film: Fire in the Forest

Exercise: What's Old Is New Again



Mission Assignment:

Watch the film *Fire in the Forest* and look for similarities and differences between what you see in the film and how we fight fire today. Document your findings in the chart below.

Subject	Then (40s-50s)	Now (2011)
<i>Example: hard hat</i>	<i>none</i>	<i>plastic</i>
<u>Equipment</u>		
Fire lookout		
Weather equipment		
Hand tools		
Training equipment		
Fire clothing		
PPE		
Other?		
<u>Terminology</u>		
Tactics		
Environmental concerns		
Fire Behavior Elements		
Perception of fire		
Other ?		
<u>Other/Miscellaneous</u>		
Fire danger ratings		
Fuel types		
Fire Weather Watches and Warnings		
Overall theme / message		
Other?		

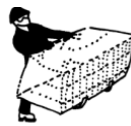
Share your findings with the group/class and discuss the following questions:

- What were the similarities and differences between now and then?
- Have things changed very much in the last 40-50 years? Why or why not?
- Which techniques, technologies, or safety practices do you think are most likely to not be seen in training films in 10-20 years?

Conclusion/ Fire Shelter

Overview

To meet the 2011 Interagency Standards for Fire and Fire Aviation Operations or the Wildland Fire and Aviation Program Management and Operations Guide, students will review and discuss last resort survival including escape and shelter deployment site selection as well as conduct “hands-on” fire shelter inspections and deployments in this module.



- Complete the 2011 Fire Refresher Evaluation form on page xx and turn in to your facilitator. Your feedback is helpful for the development of future refresher programs.
- If you have crew videos, season summaries, or other training materials you would like to be considered for inclusion in future refresher training programs, please include your contact information in the refresher comment form.

Fire Shelter Inspection / Deployment Practice

Following the guidance of the facilitator, review the process of visually inspecting a fire shelter and demonstrate the proper technique for deploying a fire shelter.

For up-to-date fire shelter information, publications, and training be sure and visit the new Fire Shelter System website at:

http://www.nifc.gov/fire_equipment/fire_shelter.htm



Want More Information?



The following is a list of websites for further reference. Some of them were used for building the Fire Refresher, and others provide additional information to supplement the individual modules.

Module 1) Introduction

- Safety and Health Working Team Reports
 - <http://www.nwcg.gov/branches/pre/rmc/shwt-archive/shwt/index2.htm>
- Annual Wildland Fire Statistics
 - http://www.nifc.gov/fire_info/fire_stats.htm
- SAFENET Main Page
 - <http://safenet.nifc.gov/safenet.nsf/SNmain?OpenFrameSet>

Module 2) Fire Orders

- http://www.nifc.gov/wfstar/archives/10_fireorders.html
- http://www.nifc.gov/wfstar/reports/Fire_Orders_ppt_handout.pdf
- http://www.nifc.gov/wfstar/reports/Fire_Orders.ppt

Module 5) Single Engine Airtankers

- BLM SEAT Program
 - <http://www.blm.gov/nifc/st/en/prog/fire/Aviation/Airops/seat.html>

Module 6) Incident Within an Incident

- Deer Park Fire Facilitated Learning Analysis
 - http://www.wildfirelessons.net/documents/Deerpark_FLA.pdf

Module 8) Beyond Your Limits

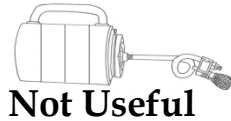
- Heat Illness Basics for Wildland Firefighters
 - www.fs.fed.us/fire/safety/heat-illness.pdf

Module 10) Fire Leadership

- Wildland Fire Leadership Development Program
 - <http://www.fireleadership.gov>

2011 Fire Refresher - STUDENT EVALUATION

Fill in the amount of drip torch according to its usefulness for you in the field.



<i>Module #</i>	<i>Title</i>	<i>DVD Portion</i>	<i>Exercise / Discussion</i>
Module 2	<i>Fire Orders</i>		
Module 3	<i>Lookouts</i>		
Module 4	<i>IAP</i>		
Module 5	<i>SEATs</i>		
Module 6	<i>Incident Within an Incident</i>		
Module 7	<i>Haz Mat</i>		
Module 8	<i>Beyond Your Limits</i>		
Module 9	<i>PPE</i>		
Module 10	<i>Leadership</i>		
Module 11	<i>Vintage Film</i>		
Comments:			

How many years have you been fighting fire? _____
 What are your highest red card qualifications? _____
 What topics should be in next year's refresher? _____